

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
7 October 2004 (07.10.2004)

PCT

(10) International Publication Number  
**WO 2004/085739 A3**

(51) International Patent Classification<sup>7</sup>: **D06P 5/30**

(21) International Application Number:  
PCT/KR2004/000642

(22) International Filing Date: 24 March 2004 (24.03.2004)

(25) Filing Language: Korean

(26) Publication Language: English

(30) Priority Data:  
10-2003-0018652 25 March 2003 (25.03.2003) KR

(71) Applicant (for all designated States except US): **INK-TEC CO. LTD.** [KR/KR]; 1124 Shingil-dong, Ansan-si, Kyungki-do 425-839 (KR).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **CHUNG, Kwang-Choon** [KR/KR]; 9-711 Gaepo4Woosung APT., Dogok-dong, Kangnam-gu, Seoul 135-270 (KR). **GONG, Myoung-Seon** [KR/KR]; 904 Hyundai4APT., Ilwon-dong, Kangnam-gu, Seoul 135-230 (KR). **KIM, Hoo-Shick** [KR/KR]; 22-402 JukongAPT., Naeson1-dong, Uiwang-si, Gyeonggi-do 437-081 (KR). **CHOI, Ju-Jin** [KR/KR]; 210-902 LGvillageAPT., Kungok-dong,

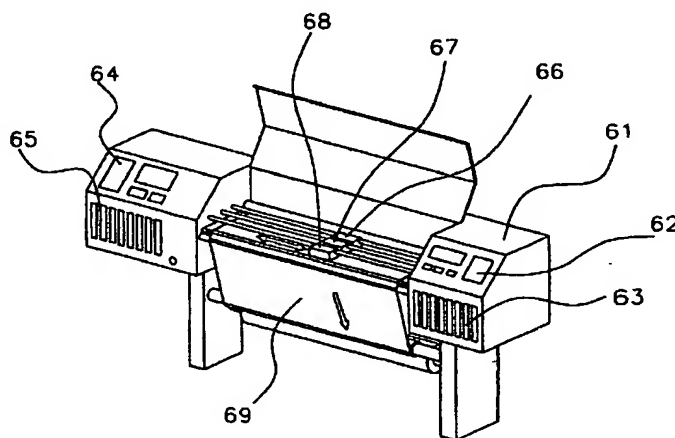
Guonsun-gu, Suwon-si 441-704 (KR). **PARK, Eun-Jin** [KR/KR]; 334-52 Imun2-dong, Dongdaemun-gu, Seoul 130-831 (KR). **KIM, Hyoung-Seok** [KR/KR]; 109-402 NarmaeAPT., Gajang-dong, Seo-gu, Daejeon 302-804 (KR). **LEE, Kyong-Min** [KR/KR]; 477-14 Sillim4-dong, Gwanak-gu, Seoul 151-871 (KR).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: PRETREATMENT METHOD AND APPARATUS OF TEXTILE APPLYING INKJET PRINTER, DIGITAL TEXTILE PRINTING METHOD AND APPARATUS COMPRISING IT



(57) Abstract: The present invention is to provide a method and an apparatus for overcoming complication of the pretreating process due to diversification of materials by digitalizing a method for pretreating a fabric in an inkjet printing process by using an inkjet device, and further, an inkjet printing method and an inkjet printing apparatus for enabling the inkjet printing work to be continuously conducted on the basis of the said pretreatment. The present invention comprises a pretreatment liquid reservoir for enabling the pretreatment mixed liquid to be applied or respective containers to be filled with individual component compositions of a pretreatment liquid, a control unit for controlling application of the pretreatment liquid and a pretreatment head for applying the pretreatment liquid to the fabric, and it may additionally comprise a dryer for drying the pretreated fabric and a printing head for performing the actual printing work. The present invention can solve the problems incidental to the conventional pretreating method and further provide a method and an apparatus for enabling a continuous process to be executed.



**Published:**

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

**(88) Date of publication of the international search report:**

10 March 2005

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/KR2004/000642

## A. CLASSIFICATION OF SUBJECT MATTER

**IPC7 D06P 5/30**

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC7 D06P; B41J; C09D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched  
Korean patents and applications for inventions since 1975

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
DERWENT, PAJ, USPTO

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	JP 08-118678 A(CANON INC ) 14 MAY 1996, SEE THE WHOLE DOCUMENT	1 - 13
Y	US 6,142,619 A(CANON KK) 11 NOVEMBER 2000, SEE THE WHOLE DOCUMENT	1 - 13
A	JP 08-311782 A(KONICA CORP ) 26 NOVEMBER 1996, SEE THE WHOLE DOCUMENT	1 - 13
A	KR 146,665 B(CANON KABUSHIKI KAISHA ) 1 AUGUST 1998, SEE THE WHOLE DOCUMENT	1 - 13

☐ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

\* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

06 JANUARY 2005 (06.01.2005)

Date of mailing of the international search report

**10 JANUARY 2005 (10.01.2005)**

Name and mailing address of the ISA/KR



Korean Intellectual Property Office  
920 Dunsan-dong, Seo-gu, Daejeon 302-701,  
Republic of Korea

Facsimile No. 82-42-472-7140

Authorized officer

WON, Ho Joon

Telephone No. 82-42-481-8293



**INTERNATIONAL SEARCH REPORT**

Information on patent family members

International application No.

PCT/KR2004/000642

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
JP 08-118678 A	14.05.1996	US 6,786,567 A US 6,252,615 A EP 699,534 B2 EP 699,534 A2	07.09.2004 26.06.2001 03.04.2002 03.06.1996
US 6,142,619 A	11.11.2000	US 6,024,431 A JP 06-320743 A2 JP 06-248582 A2 JP 06-246909 A2 EP 879,912 B1 EP 879,912 A2 EP 600,735 B1 EP 600,735 A2	15.02.2000 22.11.1994 06.09.1994 06.09.1994 02.05.2003 25.12.1998 12.07.2000 08.06.1996
JP 08-311782 A	26.11.1996	NONE	
KR 146,665 B	01.08.1998	EP 606,777 A2 EP 606,777 B1 US 5,584,918 A	20.09.1994 25.11.1998 17.12.1996